16/Appeal Brief (3)

CASE OT0426KQ3

Bet 8-9-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Joseph A. Haslwanter et al.

Application No.: 09/940,784

Filed: August 28, 2001

For: NASAL SPRAY COMPOSITIONS

Examiner: S. Tran

Group Art Unit: 1615

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

BRIEF ON APPEAL

Further to the Notice of Appeal that was filed on June 2, 2003 for the subject application, the appellants are now submitting their brief. An original signed document and two photocopies thereof are being transmitted. Enclosed is a form directing payment of the applicable fee.

1. Real Party in Interest

The real party in interest in this appeal is Schering-Plough HealthCare Products, Inc., owner of the subject patent application by virtue of an assignment executed by the inventors/appellants.

2. Related Appeals and Interferences

There are no related appeals or interferences, which will affect, or be affected by, a decision in this appeal.

3. Status of the Claims

The application was filed with claims 1-14, all of which were canceled in an amendment that also added claims 15-33. Thus, claims 15-33, appended hereto, are the subject of this appeal.

4. Status of Amendments

All of the appellants' amendments have been entered; there was no amendment presented after the final rejection.

5. Summary of the Invention

The invention is an aqueous nasal spray composition that contains the decongestant active ingredient oxymetazoline hydrochloride and a mixture of two or more polyvinylpyrrolidone polymers having different average molecular weights. This composition addresses the problem of clearance of applied active ingredient from the nose, by action of the normal mucous flow and ciliary action, before the active ingredient has adequately penetrated mucosal tisssues. By incorporating the mixture of polyvinylpyrrolidone polymers, clearance time is extended and the composition has an enhanced effectiveness.

6. Issues

The two issues to be decided can be summarized as follows:

A. Are claims 15-17 and 21-28 rendered obvious by any combination of teachings from U.S. Patent 4,728,509 to Shimizu et al., U.S. Patent 5,116,847 to Gilbert et al., and U.S. Patent 5,015,474 to Parnell?

B. Are claims 18-20 and 29-33 rendered obvious by combined teachings in the above-mentioned patents, further including the teachings of passages from a book by E. Rybacki et al.?

7. Grouping of Claims

For the purposes and issues of this appeal, the pending claims can be considered to stand or fall together.

8. Argument

Claims 15-17 and 21-28 stand finally rejected under 35 U.S.C. § 103(a) as being rendered obvious by combination of teachings from U.S. Patent 4,728,509 to Shimizu et al., U.S. Patent 5,116,847 to Gilbert et al., and U.S. Patent 5,015,474 to Parnell. The cited documents contain the following teachings:

The Shimizu et al. patent pertains to liquid pharmaceutical compositions that are eye drops or nasal drops, containing a particular anti-allergic drug substance that has a very low solubility in water. To create a solution formulation, it is asserted that the formulation must contain one of polyvinylpyrrolidone, a cyclodextrin, or caffeine, as a solubilizer ingredient. Examples of the patent showing preparations that contain polyvinylpyrrolidone indicate the average molecular weights as being 40,000 or 25,000, but there is nothing in the document that suggests using any mixture of polyvinylpyrrolidone products having different average molecular weights.

The Gilbert et al. patent discloses compositions containing the drug loperamide, including aqueous formulations that can be applied to nasal passages. Additional drug substances can optionally be included, such as the decongestant oxymetazoline hydrochloride. However, there is no mention of any need for certain of the ingredients required by the appellant's claims, such as polyvinylpyrrolidone.

The patent to Parnell describes moisturizing compositions that contain a natural oil, called "eriodictyon fluid." One embodiment (Example 12) is a liquid nasal formulation, optionally containing a decongestant. There is no mention of polyvinylpyrrolidone in this patent.

No conceivable combination of teachings from these patents would render the appellants' claims obvious. It is not even possible to find all of the claim limitations in a combination of the teachings, and the law relating to reference combinations further requires the reference documents themselves to contain a suggestion for making the asserted combination. In M.P.E.P. § 706.02(j) the requirements for a proper rejection under 35 U.S.C. § 103 are discussed, including a statement attributed to *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991): "Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

This requirement likely stems from the steps for determining obviousness prescribed by the U.S. Supreme Court in *Graham v. John Deere*, 148 USPQ 459 (1966):

1. Determine the scope and contents of the prior art.
2. Ascertain the differences between the prior art and the applicants' claims.

3. Resolve the level of ordinary skill in the relevant art.

From the second step, it is apparent that differences between the claimed invention and the cited prior art would be indicative of patentability over that art.

Absent the mention in a reference of record that a combination of two or more polyvinylpyrrolidone polymers having different average molecular weights would be useful in a nasal spray composition, there simply can be no *prima facie* case for obviousness of Claims 15-17 and 21-28, and the improper rejection of those claims should be overruled.

Claims 18-20 and 29-33 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the above-discussed combination of patents, further including the teachings of E. Rybacki et al., "Auxiliary Substances in Technology of Drug Form," *Library of a Pharmacist, Volume 7*, Warsaw, 1980. The Rybacki et al. document discusses polyoxyethylene glycols, polyvinylpyrrolidone, and other substances, but does not predict any benefit from including two or more polyvinylpyrrolidones having different molecular weights in any type of composition. In addition, Rybacki et al. contains no teachings regarding any use for polyvinylpyrrolidones in aqueous nasal spray compositions.

The Final Rejection reflects an improper use of the Rybacki et al. document. A majority of the discussion concerning polyvinylpyrrolidone is directed toward uses of the polymers to obtain desirable properties in solid pharmaceutical dosage forms; some of this discussion specifies the use of solutions of the polymer. The description of uses in liquid pharmaceutical compositions begins in the lower half of page 9 and extends into page 10, where there are described a "protective colloid," stabilized suspensions, viscous eye drops, PVP-solubilized medicaments, and a blood substitute. The discussion of solid dosage forms does not relate to the present claims and is not a proper foundation for rejecting the claims.

Nothing in the Rybacki et al. publication assists in overcoming the fundamental deficiency of the combined patent documents: the combination still does not include teachings of all of the limitations in the rejected claims (particularly the claim requirement for including two or more polyvinylpyrrolidone components having different average molecular weights). The legal standard discussed above applies fully to this rejection, and renders the rejection wholly improper. This rejection should not be sustained.

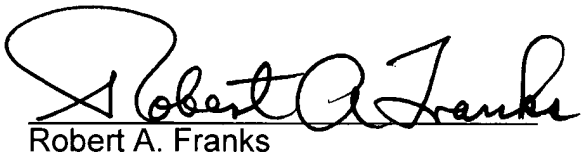
In the Advisory Action (mailed April 23, 2003) it was emphasized that obviousness can be found by combining or modifying teachings of the prior art when a teaching, suggestion, or motivation to do so is in knowledge generally available to one of ordinary skill in the art. Support for this principle was given as *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992). The *Fine* decision reversed a holding of

obviousness, because the applied references did not suggest the asserted combination and merely suggested "that one skilled in the art might find it obvious to try the claimed invention." (*Fine*, at 1599). The *Jones* decision reversed a holding of obviousness because there was no evidence to support the PTO's speculation that one skilled in the art would be motivated to make a combination of teachings.

Appellants agree that these decisions are pertinent to the present appeal. In the absence of any objective evidence in the record regarding the relevant knowledge in the art that would lead toward using a combination of polyvinylpyrrolidones having different average molecular weights, this precedent mandates a finding that the claims of this application are not obvious and a holding that the rejection is not sustainable.

As the rejections do not have either technically or legally sufficient foundations, their reversal on appeal is respectfully requested.

Respectfully submitted,



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CLAIMS ON APPEAL

15. An aqueous nasal spray composition prepared by combining ingredients comprising oxymetazoline hydrochloride and two or more linear polymers of 1-Vinyl-2-pyrrolidone having different average molecular weights.

16. The composition of claim 15 wherein one linear polymer ingredient has an average molecular weight about 10,000.

17. The composition of claim 15 wherein one linear polymer ingredient has an average molecular weight about 40,000.

18. The composition of claim 15 wherein one linear polymer ingredient has an average molecular weight about 160,000.

19. The composition of claim 15 wherein one linear polymer ingredient has an average molecular weight about 360,000.

20. The composition of claim 15 wherein one linear polymer ingredient has an average molecular weight about 40,000 and another linear polymer ingredient has an average molecular weight about 360,000.

21. The composition of claim 15 wherein the concentration of oxymetazoline hydrochloride is about 0.01 to about 0.1 percent by weight/volume.

22. The composition of claim 15 wherein the total concentration of the linear polymer ingredients is about 0.5 to about 15 percent by weight/volume.

23. The composition of claim 15, further comprising as an ingredient an aromatic alcohol.

24. The composition of claim 15, further comprising as an ingredient benzyl alcohol.

25. The composition of claim 15, further comprising as an ingredient phenylethyl alcohol.

26. The composition of claim 15, further comprising as an ingredient benzalkonium chloride.

27. The composition of claim 15, further comprising as an ingredient a water-soluble polyethylene glycol.

28. The composition of claim 15, further comprising as an ingredient a moisturizing agent selected from the group consisting of propylene glycol, glycerin and a mixture thereof.

29. An aqueous nasal spray composition prepared by combining ingredients comprising: 0.01 to 0.1 percent by weight/volume of oxymetazoline hydrochloride; a linear polymer of 1-Vinyl-2-pyrrolidone having an average molecular weight about 40,000; a linear polymer of 1-Vinyl-2-pyrrolidone having an average molecular weight about 360,000; and a water-soluble polyethylene glycol; the total concentration of the linear polymer ingredients being about 0.5 to about 15 percent by weight/volume.

30. The composition of claim 29, further comprising as an ingredient an aromatic alcohol.

31. The composition of claim 29, further comprising as an ingredient benzalkonium chloride.

32. The composition of claim 29, further comprising as an ingredient a moisturizing agent selected from the group consisting of propylene glycol, glycerin and a mixture thereof.

33. An aqueous nasal spray composition prepared by combining ingredients comprising: 0.01 to 0.1 percent by weight/volume of oxymetazoline hydrochloride; a linear polymer of 1-Vinyl-2-pyrrolidone having an average molecular weight about 40,000; a linear polymer of 1-Vinyl-2-pyrrolidone having an average molecular weight about 360,000; a water-soluble polyethylene glycol; benzalkonium chloride; and a moisturizing agent selected from the group consisting of propylene glycol, glycerin and a mixture thereof; the total concentration of the linear polymer ingredients being about 0.5 to about 15 percent by weight/volume.